**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration (NOAA)**

# Request for Comment on the Draft Prospectus of the Fifth National Climate Assessment

**AGENCY:** National Oceanic and Atmospheric Administration (NOAA), Office of Oceanic and Atmospheric Research (OAR), Department of Commerce (DOC).

**ACTION:** Notice of Request for Public Comment on the Fifth National Climate Assessment.

**SUMMARY:** With this notice, the U.S. Global Change Research Program (USGCRP) seeks public comment on the proposed themes and framework of the Fifth National Climate Assessment (NCA5) as indicated by the draft prospectus presented here. Based on input received from this notice, USGCRP will develop an annotated outline, which will be released for public comment at a later date. A call for author nominations and technical inputs will also be posted in one or more subsequent Federal Register Notices. In addition to the proposed themes and framework, this Federal Register Notice requests public comment on ways to make the

assessment information accessible and useful to multiple audiences; specific types of detailed information on regional scales that would be most useful to stakeholders; how to best describe risks and impacts, as well as potential opportunities to reduce those risks and impacts on sectors of the economy and natural and social systems; new approaches to topics addressed in previous assessments; overarching themes that NCA5 should consider addressing; and other relevant topics.

**DATES:** Comments must be submitted to the web address specified below and received by [insert date thirty days after this notice is published].

**ADDRESSES:** Comments from the public will be accepted electronically via http://www.globalchange.gov/notices. Instructions for submitting comments are available on the website. Submitters may enter text or upload files in response to this notice.

**FOR FURTHER INFORMATION CONTACT:** Chris Avery, (202) 419-3474, cavery@usgcrp.gov, U.S. Global Change Research Program.

**SUPPLEMENTARY INFORMATION:** USGCRP is mandated under the Global Change Research Act (GCRA) of 1990 to conduct a quadrennial National Climate Assessment (NCA). The most recent, NCA4, was completed in 2018 and delivered in two volumes: the Climate Science Special Report (CSSR, science2017.globalchange.gov) and Impacts, Risks, and Adaptation in the United States (NCA4, nca2018.globalchange.gov).

In addition to the two volumes of NCA4, other recent assessments by the U.S. Government will inform NCA5, including the Second State of the Carbon Cycle Report (SOCCR2, carbon2018.globalchange.gov); the Impacts of Climate Change on Human Health in the United States (health2016.globalchange.gov); and Climate Change, Global Food Security, and the U.S. Food System (www.usda.gov/oce/climate_change/FoodSecurity.htm).

NCA5 development will be transparent and inclusive, offering opportunities for public participation throughout the process. The production and review processes are designed to result in a report that is authoritative,

timely, relevant, and policy-neutral; valued by authors and users; accessible to the widest possible audience; and fully compliant with the GCRA.

Background information, additional details, and instructions for submitting comments can be found at http://www.globalchange.gov/notices. Responses to this Request for Comment can be entered via this website.

Note: The following is intended to be a high-level description of the proposed themes and framework of NCA5. Subsequent Federal Register Notices will provide additional details on the structure and content of the report and opportunities for the public to review and give feedback on the same.

OVERARCHING THEMES FOR NCA5:

NCA5 will be GCRA compliant and will include a number of overarching themes and perspectives that respond to needs and gaps identified by NCA4. The following is a list of proposed themes for NCA5:

o Identification of advancements or improvements,

relative to NCA4, in scientific understanding of human-induced and natural processes of global change and the resulting implications for the United States.

o Identification of vulnerable populations for climate-related risks and potential impacts, a theme highlighted in multiple previous assessments.

o Characterization of scientific uncertainties associated with key findings.

o Characterization of current and future risks associated with global change with quantifiable metrics, such as indicators, where possible, and with the needs of multiple audiences in mind.

o Emphasis on 1) near-term trends and projections that can inform adaptation needs; 2) long-term projections that are more scenario dependent; and 3) in some cases, timeframes past 2100, to be consistent with the GCRA and to indicate anticipated legacy effects of the human influence on the climate and oceans.

We seek comments on these proposed overarching themes, as well as suggestions for potential additional overarching themes.

## PROPOSED FRAMEWORK FOR NCA5

What follows is a proposed high-level framework intended to guide the scope and content for NCA5. Public comments are sought on all aspects of this proposed framework. The proposed framework is presented here in five parts: 1) introduction and context for NCA5; 2) foundational physical and biological science; 3) human health and welfare, societal, and environmental areas that are vulnerable to a changing climate; 4) regional and, where possible, sub-regional analyses within the United States; and 5) information needed to inform climate change adaptation, increased resiliency, and risk reduction.

This framework presents the anticipated scope and content of NCA5; it is not an indicator of the final structure of the report.

### 1. Introduction and Context for NCA5

This content will describe the following:

- Context for NCA5 as noted above, including the NCA's relationship to complementary domestic and international assessment efforts.

- Advancements in science since NCA4, and discussion of the scientific confidence and uncertainty associated with these findings, as well as any new approaches or differences in scope relative to NCA4. This information will include any special assessments completed or in progress post-NCA4, in particular those under the auspices of USGCRP.

- Changing global and national conditions that influence 1) drivers of climate change, namely the activities that lead to emissions and atmospheric buildup of greenhouse gas concentrations; and 2) factors that affect resiliency and vulnerability, such as demographic and land-use changes, behavioral changes, advances in technology, and economic development.

- The geographic scope (see Part 4) and the temporal scope (i.e., historic to the next 25 to 100 years).

o Risks to interconnected natural, built, and social systems, which are increasingly vulnerable to cascading impacts of global change that are often difficult to predict. For example, extreme weather and climate-related impacts on one system can result in increased risks or failures in other critical systems, including water resources, food production and distribution, energy and transportation, and international trade. However, with proper design and implementation, increased connectivity may have salutary impacts on resiliency to, response to, and recovery from extreme weather and climate-related impacts.

o Terms and their definitions used to describe confidence and uncertainty levels associated with key statements and findings (and accompanying traceable accounts), which may be similar to those used in NCA4.

We seek public comment on the proposed introductory and contextual material described above for NCA5.

2. Foundational Physical and Biological Science

NCA5 will assess the state of scientific evidence regarding

the physical and biological drivers of global change, with an emphasis on advances in knowledge since NCA4. This section will include the following:

- Observations of changes in climate-related phenomena such as atmospheric composition, radiative forcing, temperature, precipitation, climate variability, large-scale climate modes (e.g., El Niño events), drought, floods and associated hydrologic events (e.g., streamflow, snowpack), sea-level rise and other physical ocean changes, biogeochemistry of land and marine systems, ocean acidification, extreme storms (e.g., hurricanes), atmospheric rivers, polar changes (including permafrost and land-ice dynamics), ice-sheet dynamics, and attribution of physical and biophysical processes to human activities. Where appropriate, descriptions of observed changes specific to the United States at national and subnational scales.

- Future projections of changes in Earth system processes based on modeling results of the Coupled Model Intercomparison Project (CMIP). Treatment of future scenarios, and associated risks and impacts as described

below, will emphasize the most recent literature (i.e., CMIP6), with CMIP5 and other future scenarios included as determined by the available literature.

We seek public comment on the proposed physical and biological science framing described above for NCA5.

3. Human Health and Welfare, Societal, and Environmental Vulnerabilities to a Changing Climate

The GCRA of 1990 requires that the NCA analyze "the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity." NCA5 will provide national-level overviews of observed and potential effects and projected trends under a range of emissions scenarios in these key areas of concern for people and the environment, with supporting regional information, as described under Part 4.

To better understand global change, non-climatic trends (e.g., population changes) will be briefly discussed in order to set a broader context within which the effects of

climate change can be understood. Current and future risks, impacts, (including differential impacts), and benefits will be identified in each of these topic areas, using quantifiable metrics, such as indicators, where possible. The impact of extreme events in each area will be addressed where possible. In addition, potential adaptive measures to minimize risks will be described for each area, to the extent these are identified in the published literature.

In addition to coverage of these mandated topics, the following additional specific areas are proposed for inclusion in NCA5: land cover and land use change; forests; ecosystems and ecosystem services; coasts; oceans and marine resources; built environment; urban systems; air quality; effects on tribal and indigenous communities; economics; and international effects, in particular those that may raise environmental, humanitarian, trade, or security issues for the United States.

We seek public comment on the proposed areas of focus for NCA5 as described above and welcome input on other topics that should be considered for inclusion.

4. Regional Analyses within the United States

This section will describe regional-level perspectives for each of the areas identified in Part 3, allowing for discussion of topics of interest to each region.

The proposed regional analyses for NCA5 will follow the model developed for NCA4, which included the following regions of the United States: Northeast, Southeast, U.S. Caribbean, Midwest, Northern Great Plains, Southern Great Plains, Northwest, Southwest, Alaska, and Hawai'i and U.S.-Affiliated Pacific Islands (see nca2018.globalchange.gov/chapter/front-matter-guide/#fig-1). Areas of focus will vary across regions based on the availability of research and the regional identification of needs.

As appropriate and where available, the perspectives described in Part 4 will also highlight state-level information, as well as urban and rural case studies to showcase climate trends, potential risks, and resiliency planning with local specificity.

We seek public comment on the proposed regional breakout

for NCA5, the level of detail to be provided at regional scales, sectors or topics to focus on within particular regions, and overarching themes that should inform the regional analyses of NCA5.

5. Information Needed to Support Climate Change Adaptation, Increased Resiliency, and Risk Reduction

Part 5 will identify needs and opportunities for adaptive measures and resiliency planning in the face of observed and projected changes in climate. NCA5 is not a policy document, and therefore will not evaluate policy measures, actions, instruments, or mechanisms to deliver or incentivize either adaptation or mitigation responses at any level of government. Rather, the intention of NCA5 is to inform the Nation, and different regions within the Nation, about near-term adaptation and resiliency needs over the next few decades that are likely to persist regardless of emissions pathway. Adaptation and resiliency needs and opportunities will be drawn from relevant information from Parts 2, 3, and 4 as outlined above, including evidence of successful measures, and discussed in the context of literature described below.

Review of the following is proposed for inclusion in Part 5:

- Recent literature on economic impacts across sectors, regions, and levels of warming.

- Recent literature on the potential for greenhouse gas emissions mitigation through natural and technological solutions.

- Recent literature describing case studies (see Part 4), where relevant.

Links to U.S. government decision-support tools (e.g., the U.S. Climate Resilience Toolkit, toolkit.climate.gov) will also be included here, where relevant.

We seek public comment on the proposed framing of information needed to support climate change adaptation, increased resiliency, and risk reduction described above for NCA5.

Finally, various appendices are planned to provide

additional background, context, and detail on the inputs to NCA5. Topics currently planned for inclusion include report process details, legal mandates and requirements, tools and technical inputs, and frequently asked questions. Suggestions for other appendix topics are requested.

We seek public comment on all aspects of the anticipated scope and content of this framework for NCA5, as described above.

**RESPONSES:** Response to this Request for Comment is voluntary. Respondents need not reply to all questions or topics. Responses may be used by the U.S. Government for program planning on a non-attribution basis. NOAA therefore requests that no business proprietary information or copyrighted information be submitted in response to this Request for Comment. Please note that the U.S. Government will not pay for response preparation, or for the use of any information contained in the response.

Dated: July 7, 2020.

_____

David Holst,

*Director Chief Financial Officer/CAO,*

*Office of Oceanic and Atmospheric Research,*

*National Oceanic and Atmospheric Administration.*

Billing Code: 50-44-0003 U8R1CA4/P01

[FR Doc. 2020-14904 Filed: 7/9/2020 8:45 am; Publication Date: 7/10/2020]